Reviewer’s report

Title: The MEDEA FAR-EAST study  Conceptual framework, methods and first findings of a multicenter cross-sectional observational study

Version: 0 Date: 17 Dec 2018

Reviewer: Yves Chaput

Reviewer’s report:

Thank you for giving me the opportunity to review this manuscript. In general, the topic is appropriate for BMC Emergency Medicine and should be of interest to the average reader of this journal.

I have divided my queries into major and minor points. Major points are those I would like the authors do address, either in changes to the manuscript or, if they feel the query unwarranted, then a counter argument in their response letter. Minor points are mere suggestions made in order to improve readability and the authors a free to consider them or not.

MAJOR POINTS

GENERAL COMMENT:

Not quite certain that tables (or figures for that matter) in the BACKGROUND section are permitted in BMC Emergency Medicine. The authors should research the BMC Emergency Medicine web site regarding manuscript formatting to assess whether this is appropriate.

BACKGROUND SECTION

(1) Although generally well written The BACKGROUND section could benefit from some clarifications in order to help the reader follow the author's reasoning.

As a suggestion I would eliminate the first phrase (line 42 to 44) and begin the Background section with the second and third phrases combined. I would attach this phrase to the second paragraph, which would now become the first paragraph. I would eliminate the first phrase of the now 3rd paragraph ("In China, …") and take lines 62 to 66 as the new 2nd paragraph. I would keep lines 54 to 59 as the new 3rd paragraph. The authors can see below if they feel these changes improve readability. Obviously this is but an example and the authors should consider alternatives also.

"CVD is now the leading cause of death in China (1), accounting for an incidence of two million acute myocardial infarction (AMI) patients and responsible for 64.25 deaths per 100.000 inhabitants in 2014 (3). " Therapeutic interventions in AMI are highly time-dependent (4).
Despite recommendations by the international guidelines to arrive at hospital door within two hours upon symptom onset, prehospital delay (PHD) remains a global obstacle to timely treatment (4-6). A recent review on prehospital delay which included studies from Southeast Asia and China has estimated median prehospital delay time to range between 1.6 hours to 12.9 hours worldwide (7). One major component of PHD is patient-related delay (8), which is widely acknowledged to account for about 75% of overall prehospital delay (9).

We identified eight Pub-med listed Chinese delay studies published in English language (16-23) (see 62 Table 1). Compared to estimates of median delay times in high-income countries (24), median prehospital delay times in China ranged in a relatively favorable time window of 130 to 150 minutes (16,17,19,20,22). However, given that more than half of Chinese MI-patients fail to reach hospital within the recommended time window of 120 minutes, these possess clinical relevance and warrant further efforts. Substantial efforts have been undertaken to reduce patient-related prehospital delay in numerous population and secondary based prevention campaigns (10), however, results were mostly disappointing and evidence has even suggested an increase in prehospital delay time over time (11,12). Nevertheless, positive effects on prehospital delay could be demonstrated by recent interventions that have specifically addressed subjective barriers in patient decision making (13), providing a promising concept for future preventive efforts (14).

I would rewrite the paragraph beginning between lines 67 and 81. There are just too many vague and subjective phrases such as "...conservative outlet..." on line 67 or a "..complex network of inner barriers..." on line 71 or "symptom vagueness" and "symptom incongruence" on line 76. Furthermore, the referred to Figure 1 does not really clarify this in any significant way. I grasp that the authors are trying to illustrate the complex decisional algorithms involved as an individual seeks help for an AMI. However, the paragraph just adds to this confusion. These complex interactions should be more precisely detailed.

(2) The primary objective of this study is not clear. Just saying that it was to "apply a holistic approach" is fine but you have to define what you consider to be a holistic approach. Especially in relation to the paragraph above, which in itself is not particularly clear. I would also clearly state the preliminary findings that the authors wish to present in relation to the total data collection.

METHODS SECTION

(3) The first phrase, line 91, should be in the last paragraph (i.e., the aims section) of the BACKGROUND section.

(4) In the paragraph beginning with line 107 it is not clear whether the 38 emergency stations are fully private in comparison to the outpatient departments of pubic hospitals. Indeed it would be
pertinent to slightly elaborate the differential private / public medical offerings in the city given that costs may be a factor influencing MED Er visits.

(5) Line 117, Some of the rating scales do not appear to be validated for the language and this should be mentioned in a limitations section.

(6) I would think about shifting section 2.3 (Sample size and drop-out analysis) into the RESULTS section and substituting the present Table 1 with a new Table 1 consisting of data on the study population. Again, I would not present any data analysis (drop out analysis) in the METHODS section but rather, in the RESULTS section.

(7) Same comment as to Table 2, which should be placed in the RESULTS section, with only the methodology used to obtain this data in the METHODS section.

(8) I am a bit uncertain as to the pertinence of Table 3. It does not give the reader a good understanding of why the scales were selected and what the type of data the authors hoped to obtain from them. One of the objectives of this manuscript is to detail the methodology used (in relation to the hypotheses elaborated in the BACKGROUND section). I would have liked to read something like "We used these 3 scales in order to obtain these types of variables (and so on). This is just not obvious from either the text (lines 172 to 174) or Table 3 as it is presently structured.

(9) With the time factor being so crucial in this study I was somewhat surprised that it comprises but one single phrase (line 152) of the RESULTS section. One would certainly like to have very precise and complete knowledge at to exactly how time of onset was determined. Also, what is the % variance in this triangulation technique?

RESULTS

This section is relatively sparse compared to the BACKGROUND AND METHODS sections. I realize however that these are "preliminary" data. Perhaps with shifting some tables and data from the MEHTODS to this section would flesh it out a bit.

DISCUSSION

(10) As with the BACKGROUND section the RESULTS section could benefit from some rearranging. The first paragraph of the RESULTS section should state what the authors think is
their primary finding (i.e., their findings on pre hospital delays). They start off by reviewing the literature worldwide. I would restructure this.

(11) A corollary is that they do not highlight their stated secondary aim, that being elucidating those complex factors precipitating a decision to seek help for an AMI. Figure 1 is not a result per see but rather, a conceptual framework to be tested using real data.

(12) I have difficulty with the purpose of their second paragraph, which is usually reserved for reviewing data concordant / discordant with the primary finding or, alternatively, detailing the study's secondary findings. The present second paragraph could easily be condensed and put lower in the Discussion priority list.

MINOR POINTS:

Style and grammar;

BACKGROUND SECTION

Line 55, "...numerous populations...."

Line 61, "...published in the English language...".

Line 65, "...120 minutes is of clinical relevance and warrants further efforts".

Line 82, "...apply a holistic approach in assessing patient related delays. We used an assessment instrument from an earlier delay study conducted in ..."

Line 124 "Efficient communication allowed consecutive ..." I would eliminate "Efficient communication" with simply "Patient inclusion and data collection were performed within 2-days ..."

Line 127 "A regular newsletter informed...of study progress and developments".

Line 128 "...received training prior to ...".

METHODS SECTION

Line 94, "...inclusion criteria was a hospitalization..."
RESULTS SECTION

Line 223, "During the acute phase of the AMI…" this phrase is somewhat difficult to follow as the A in AMI stands for acute. Perhaps the authors might rephrase as "The initial phase ? or the "onset of AMI"?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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